The Art World's Concept Of Negative Space Applied To System Safety Management

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Keywords: safety management, lessons learned, managing dissenting opinion

Abstract

Tools from several different disciplines can improve system safety management. This paper relates the Art World with our system safety world, showing useful art schools of thought applied to system safety management, developing an art theory-system safety bridge. This bridge is then used to demonstrate relations with risk management, the legal system, personnel management and basic management (establishing priorities). One goal of this presentation/paper is simply to be a fun diversion from the many technical topics presented during the conference.

Introduction

Can innovative management techniques be derived from principles and practices taught by the school of arts? Could the eccentric personality of the 19th century impressionist painter, Degas, be applied to 20th century system safety management philosophy? The art community instructs its students to paint or draw in negative space. A short discussion of negative space is necessary to establish its definition and link the art world to the world of system safety.

Background and Discussion

Art and System Safety: When an artist makes a decision to paint a scene, the first objective is to identify the important visual elements of the scene. All else in the scene is negative space. The artist then draws or paints the negative space. The primary elements of interest simply materialize as the lines and planes of negative space are drawn or painted. Once these primary areas of interest surface, then special attention to their detail is applied. The reason the art world encourages art students to work in negative space is because the mind automatically alters the true characteristics of the scene into a variation of the scene to represent what the logical, left side of the mind dictates as 'must be true.' Therefore, allowing the logic half of the brain to govern the creative process typically produces skewed variations of a visual scene exhibiting surreal attributes. To illustrate, sit across the room and produce a quick sketch of a table. The drawing will normally take on an unnatural appearance because the table legs are at odd lengths and peculiar angles. What happened? Well, the logic half of the mind directed the creative half to produce a drawing with table legs of the same length. The resulting sketch is rubbish.

A relationship can be established between art and system safety management. The negative space theory is the vehicle that bridges the gap between the two seemingly unrelated schools of thought. To build a case, several examples of typical business practices are presented and evaluated against the negative space concepts of the art world with interesting and practical results. The point of this entire exercise is to demonstrate the value of answering the question, *What do I not need to know and what I do not need to do to solve the difficulty during problem definition?* Objectives become clearest when all paraxial clutter is removed.

Risk Management: Risk management documents the process that ultimately leads to a decision. Alternative problem solutions are listed and the consequences of each alternative are assessed. The consequences of each alternative not selected relate to negative space theory. The risk

management process is the only example of the four listed in this paper where large business organizations have made successful strides incorporating the negative space theory. Small business executives typically intuitively manage the risk without the laborious effort of documentation. The exact identical need exists in the system safety community. Therefore, it is an equally important aspect of the documentation for management teams' decisions. The absence of documented dissenting comments is a strong indicator that risk management policy is failing to achieve its full potential. In the future when existing plans need modification, the dissenting comments generated during the plan's development will be a valuable data source.

Legal System: The best documentation example resides in the United States legal system. The United States court system documents the dissenting comments of a judge who disagrees with the majority opinion. Documenting the dissenting comments is important in the legal system. Dissenting comments in the court system equate to negative space in the art world. When the court system documents the dissenting comments, those comments represent a minority view, which the legal system recognizes as important when decisions are challenged during future legal action. The first valuable attribute of documenting dissenting comments in system safety management is that a more complete picture of the situation is recognized and recorded, and like the legal world, as the environment changes, design retrofit options are more easily evaluated when a more complete package is available from system genesis. A second valuable attribute is that employees who disagree with management direction are more likely to get on board once they are convinced that they have been heard and understood, and this is easily accomplished by documenting the rationale for their opposition in dissenting comments.

As directly taken from the legal environment, the concept of managing dissent has a utopian aura. Employees are more likely to support painful choices once they have been offered dissent. Direction can be challenged in a more meaningful way when all sides of a problem have been documented, which is very important in a rapidly changing environment. However, when this concept is applied, there can be negative side effects. Offering employee dissent can seemingly legitimize the continuous discourse and moanings and railings of a sniper during difficult times. This does not occur in the legal environment because the decision at trial is final and even though the minority provided a thorough dissent, that very minority in the future will uphold the decision of the majority. So, if the dissent is to be used in the business or safety management environment, then the decision must be yoked to the dissent with respect to timing. In other words, after the decision is finalized, then further dissent is unacceptable.

Directing Subordinates: Negative space theory would require that the evaluation include a listing of tasks or activities currently being accomplished that must be eliminated in the future to compensate for the redirection of resources necessary to accomplish new tasks. If this difficult part of the decision process is not accomplished, then the decision process is flawed. Additional tasks can only be added (without removing former tasks) if management has not been managing resources in an optimum manner, not a compliment to current management. If the new plan simply adds tasks to an already burdened work force, then all former tasks will be accomplished at a reduced level of effectiveness. Therefore, the workforce is managing its work and not management; this too is not a compliment to existing management. Applying the art principles of negative space and identifying what will not be done when new tasks are added is simply prudent management.

Problem Solution: Basic management theory provides guidance and structure to a problem solution. Defining goals is typically the first step. Agreed. Define the problem, step two; or the order of these first two may be reversed based on the situation. Agreed regardless of order of the

first two. List alternative problem solutions may be step three. Stop! Apply negative space theory. Ask yourself, 'What do I not need to know and what do I not need to do to solve this problem?' Or an alternative question may be, 'What is not important?' Many issues clear up during consideration of these simple questions. This important practical aspect of 'negative space' theory is that it is a tool for system safety managers to improve the efficiency of problem solving, as well as to deflect out-of-scope questions from superiors during the decision process.

Establishing Priorities: Whether one wallows in details or drowns in details, the application of negative space theory improves insight into any situation. Ignore the details within negative space. Presenting the minutiae in the negative space of an art scene acts as a detraction from the important details. The same philosophy is true for system safety management action. Once the superfluous details are removed from the equation, priorities can be much more easily established.

Conclusions

Several modern-day examples were presented demonstrating use applications of opposites or negative space. However, this concept is not a 20th century notion. In China, between 480-390 BC, Lao Tzu contemplated the paradox of opposites (ref. 1).

Before taking a breath, one must first release a breath.
That which weakens must first be strengthened.
To be overthrown, a thing must first be raised up.
Before anything is taken, gifts must first be given.
This is called "hiding the light."
The soft overcomes the hard; and the weak defeats the strong.
Fish should not be taken from the deep, and one's weapons should not be displayed.

Pascale and Athos addressed this concept in the Art of Japanese Management, (ref. 2) "The Japanese embrace an idea of the world that says, although there is "nothing" there is still something. Consider this analogy: in English we often refer to an empty space as, for example, "the space between the chair and the table." In the Japanese equivalent, the space isn't "empty"; it's "full of nothing." The illustration makes this point: Westerners speak of what is unknown primarily in reference to what is known (i.e., of the space between the chair and the table); the Japanese view of "nothing" illustrates that dignity can be given to emptiness in its own right. One finds symbols of this in a Zen garden, where a few large rocks stand alone in a sea of raked pebbles. Westerners see the rocks; the Japanese are trained to pay attention to the space around them. A Tao verse explains:

Thirty spokes are made one by holes in a hub. Together with the vacancies between them, they comprise a wheel.
Thus we are helped by what is not to use what is.

The Japanese believe that by removing yourself from the picture you gain greater insight into what truly is there."

Defining what is not important can be illustrated by practical example: Refer to 29CFR 1910.147, the requirement for Lockout-Tagout. The first paragraph is "Scope, applicability and purpose". The second paragraph lists the things the standard does not cover. Jim Collins said "'Stop doing' lists are more important than 'to do' lists in his book, Good to Great (ref. 3). Peter Drucker's book, Management Challenges for the 21st Century (ref. 4) begins with the book's objectives and then lists what the book is not intended to do. Drucker described the idea of

discontinuing low value tasks as "organized abandonment." While discussing knowledge workers' productivity, Drucker used an example of nurses who, when polled, had a split opinion as to whether their primary obligation was to the doctor or the patient. However, they unanimously agreed that obstacles to productivity were time spent answering questions from patient's families and filling out paper. When the hospital administration responded by hiring clerks at a fraction of the cost of a nurse, nurse turnover went down and productivity went up. In my opinion, this example also reflects work in negative space because the essence of the example dealt with what distracts.

The application of techniques to system safety management that were borrowed from the art world and reinforced by other disciplines and cultures open new conduits in the minds of system safety managers and give way to creative and innovative approaches to problem solution that would normally be unnoticed. Novelist and diarist Edmond de Goncourt made the following observation of the impressionist painter, Degas, "What an original fellow, this Degas — sickly, hypochondriac, with such delicate eyes that he fears losing his sight, and for this very reason he is especially sensitive and aware of the reverse character of things." (ref. 5) This fact that Degas evaluated life through the 'reverse character of things' is an astonishing trait. Even more amazing is that someone recognized this characteristic and documented it. It is the value of this type of 'reverse' thinking that is presented here as a tool for system safety managers.

System Safety professionals already apply the basic cornerstone of negative space or opposites. In our everyday activities we continuously weigh safety versus the hazard. The specific application of negative space to the business examples clearly confirmed the necessity of eliminating peripheral data in order to complete the management process. Negative space theory is a tool, which removes distractions that camouflage the best solutions to problems. The obvious recommendation to the system safety community is to break from existing and entrenched patterns of thought and commence with more right brain management from the art world to jump-start the creative dynamics. Finally, summarizing the negative space theory recommendations: Define and determine the consequences of the *not*. Understanding what is not to be done and what information is not important will improve the organizational efficiency and better manage the risk of future projects.

References

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Biography

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